

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
Comprehensive Review of Licensing and)	IB Docket No. 12-267
Operating Rules for Satellite Services)	

**COMMENTS OF
THE BOEING COMPANY**

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SUMMARY

The Boeing Company (“Boeing”) responds to the Commission’s request for comment on whether the Commission should provide greater specificity in the rules concerning the evidence appropriate for demonstrating compliance with the Critical Design Review (“CDR”) milestone. Although the Commission has indicated that it would not prescribe a particular method for licensees to demonstrate completion of critical design review, current Bureau practice often requires the submission of full CDR reports. Such a policy not only results in the disclosure of extremely confidential and proprietary documents, but has also made CDR milestone review more cumbersome, protracted, and detailed than necessary to serve the purpose of an objective and easily enforced interim indicator ensuring that licensees are proceeding with satellite construction.

Recent decisions regarding the CDR milestone demonstrate that the Bureau has not used the CDR milestone showing to cancel a satellite license prior to the licensee’s subsequent Commencement of Construction milestone. Instead, cancellations based on the CDR review were often significantly delayed and could easily have been based on the licensee’s failure to meet the Commencement of Construction milestone. Thus, the expanded CDR evidentiary requirement does not appear to further the Commission’s goal of ensuring that scarce spectrum does not lie fallow, while often requiring licensees to produce extremely sensitive technical documentation.

Boeing therefore suggests that, rather than requiring satellite licensees to routinely disclose highly sensitive CDR reports to demonstrate compliance with the CDR milestone, the Bureau should instead rely primarily on the three factors originally identified by the Commission to establish whether the CDR deadline has been satisfied.

I. THE COMMISSION'S CDR EVIDENTIARY REQUIREMENTS HAVE BEEN EXPANDING UNNECESSARILY

The *NPRM* requests comment on whether the Commission should provide “greater specificity in the rules concerning the evidence appropriate for demonstrating compliance with the CDR” milestone.² At present, the Commission’s rules state that satellite licensees are required to submit “information to the Commission sufficient to demonstrate that the licensee has completed the critical design review of the licensed satellite system on or before the date scheduled for entering into such completion.”³ When the Commission adopted this requirement, it indicated that it would not prescribe a particular method for licensees to show that they have met the CDR milestone.⁴ The Commission explained, however, that licensees had the burden of proof in demonstrating their compliance and evidence of such compliance could include:

1. evidence of a large payment of money, required by most construction contracts at the time of the spacecraft CDR;
2. affidavits from independent manufacturers; and
3. evidence that the licensee has ordered all the long lead items needed to begin physical construction of the spacecraft.⁵

In providing these examples, the Commission cautioned that “on occasion” it may be necessary or appropriate to supplement the record by requiring licensees “to provide further information, or to conduct physical inspections.”⁶

² *Id.*, ¶ 30.

³ 47 C.F.R. § 25.164(d).

⁴ *See Amendment of the Commission’s Space Station Licensing Rules and Policies*, IB Docket No. 02-34, First Report and Order and Further Notice of Proposed Rulemaking, 18 FCC Rcd 10760, ¶ 191 (2003) (“*Space Station Licensing Reform Order*”).

⁵ *See id.*

⁶ *Id.*

Less than one year later, the International Bureau released a Public Notice that appeared to significantly revise the Commission's criteria with respect to the evidence that a satellite licensee may need to supply to demonstrate compliance with the CDR milestone requirement. Couched as "guidance," the International Bureau directed that satellite licenses "should be prepared, upon request, to submit any or all of the following information:

1. The documentation package prepared for payload subsystem CDR and the resulting CDR Report and Actions Items list (preferably on CD-ROM, but paper is acceptable);
2. Evidence of payment up through the date of CDR, either through copies of cancelled checks or a letter signed by the authorized entity certifying payment and the amount and dates of those payments; and
3. Any revisions to the satellite manufacturing contract, whether modified, amended, or rescinded and replaced, or that reflect contractual arrangements in any way different from the contract previously submitted to the Commission to show compliance with the milestone for entering into a satellite manufacturing agreement."⁷

By the time the International Bureau released this Public Notice, it had already imposed these new evidentiary requirements on satellite licensees in the 2 GHz Mobile Satellite Service ("MSS"), requiring them to file copies with the Bureau of their "CDR Report and Actions Items List, and evidence that milestone payments required by their respective satellite-manufacturing contract had been made."⁸

Although events beyond that point are somewhat anecdotal, it is Boeing's impression that the International Bureau has thereafter required satellite licensees more often than not to submit

⁷ Public Notice, *"The International Bureau Provides Guidance Concerning the Critical Design Review Milestone Requirements,"* DA 04-787, at 1 (March 25, 2004). The Public Notice indicated that satellite licensees that construct their own satellites would be subject to additional enumerated requirements.

⁸ Public Notice, *"Satellite Division information: 2 GHz MSS Systems in Compliance with Second Milestone Requirement,"* DA 04-778, at 1 (March 25, 2004).

copies of their CDR Reports and Actions Items lists. Further, the International Bureau may not be limiting these disclosure requirements to the Payload Subsystem CDR, requiring instead disclosure of the entire spacecraft CDR. Thus, what the Commission described as an evidentiary need that would arise “on occasion” may be approaching the norm.

II. OVERLY EXPANSIVE CDR EVIDENTIARY REQUIREMENTS POSE A RISK TO CONFIDENTIALITY AND COMPETITION

Boeing’s concern about the practice of requiring the filing of spacecraft CDRs arises from its role as a leading manufacturer of commercial satellites. As Boeing has explained to the Commission in requests for confidential treatment, a satellite CDR, including its Payload Subsystem CDR, is an extremely confidential and proprietary document that routinely contains trade secrets and other sensitive commercial and technical information regarding the construction of satellites. The satellite manufacturing industry is exceedingly competitive, with the global manufacturing capacity for satellites far exceeding demand for satellite construction services. Although some satellite manufacturers compete on price, elite manufacturers additionally compete through the development of new technology and manufacturing processes that increase the operational capabilities, reliability, and life of satellites to enable the provision of more advance communications services to more people, while reducing the amortized lifetime cost of the spacecraft.

Satellite manufacturers are exceedingly diligent in ensuring the confidentiality of their CDR reports and seek to minimize disclosure of this information to the greatest extent possible. Consistent with these practices, Boeing believes that the FCC and its International Bureau should require the disclosure of satellite CDR reports to the Bureau staff only when absolutely necessary to ascertain a satellite licensee’s compliance with the Commission’s rules.

In expressing this position, Boeing acknowledges that, if the filing of CDR reports with the Bureau was significantly probative or determinative to the milestone review process, that fact might justify the risks to confidentiality of requiring their disclosure. A review of Commission decisions released since the adoption of the CDR milestone requirement, however, suggests that this is not the case.

III. CDR REPORTS ARE NOT CENTRAL TO THE COMMISSION’S MILESTONE REVIEW PROCESS

The Commission adopted its CDR milestone requirement in order to address the gap that exists (two years for geostationary satellites) between the milestone deadline for Contract Execution and the milestone deadline for Commencement of Construction. As the Commission explained, “scarce orbit and spectrum resources...lie fallow [when] existing licensees are not proceeding.”⁹ A CDR milestone requirement allows the spectrum to be reassigned to an entity willing and able to construct a satellite system in a timely manner.

In practice, however, the Bureau does not appear to have ever used a CDR milestone showing to cancel a satellite license prior to the deadline for the subsequent Commencement of Construction milestone. In other words, although the Bureau has on at least two occasions used a CDR milestone showing to justify cancelling a satellite license, in neither of those cases did the CDR milestone reduce the amount of time that scarce spectrum resources remained potentially encumbered by a licensee. Further, in each of these cases, the catalyst for the Bureau’s actions appears to have been the filing by the licensee of a request to modify its subsequent milestones, rather than the passage of the CDR milestone deadline.

⁹ *Space Station Licensing Reform Order*, ¶ 189.

For example, On July 26, 2011, the Bureau issued an order cancelling the spacecraft license of Spectrum Five LLC after concluding that the licensee had not satisfied its November 29, 2008 CDR milestone deadline.¹⁰ The Bureau's order was issued more than two years after Spectrum Five's CDR milestone deadline and more than six months after the passage of Spectrum Five's subsequent milestone (a November 29, 2010 deadline to complete construction). Further, the Bureau's decision was issued in the context of the licensee's request to extend or waive its milestones, rather than contemporaneously with the Bureau's review of Spectrum Five's CDR milestone showing.¹¹ Although the Bureau's decision was based on a failure to satisfy the CDR milestone, it could have just as easily relied on the fact that the physical construction of the satellite was not completed by the construction completion milestone deadline and, in fact, the licensee had halted work on satellite construction shortly after the November 2008 CDR milestone deadline.¹²

In a similar decision released on the same day (July 26, 2011), the Bureau cancelled a satellite license of EchoStar Corporation after concluding that "the CDR package submitted by EchoStar falls far short of what is required to demonstrate compliance with the CDR milestone."¹³ Here again, the Bureau's order was issued more than two years after EchoStar's CDR milestone deadline and more than six months after the passage of EchoStar's subsequent

¹⁰ See *In the Matter of Spectrum Five LLC, Petition for Declaratory Ruling to Extend or Waiver Construction Milestone*, DA 11-1252, ¶ 19 (July 26, 011).

¹¹ See *id.*, ¶ 2.

¹² See *id.*, ¶ 5.

¹³ See *EchoStar Corporation Certifications of Milestone Compliance; Application to Authorize Operations of the EchoStar 8 Satellite at the 86.5° W.L. Orbital Location*, DA 11-1251, ¶ 7 (July 26, 2011).

milestone (a November 29, 2010 deadline to complete construction).¹⁴ The Bureau's order was issued in the context of the licensee's request to modify its license to satisfy its milestone obligations using an existing in-orbit satellite, rather than contemporaneously with the Bureau's review of EchoStar's CDR milestone showing.¹⁵

In the EchoStar case, the Bureau did purport to rely on the substance of EchoStar's CDR report to reach its conclusion even though such reliance was entirely unnecessary. EchoStar had already acknowledged that it did not complete construction of the satellite by the Completion of Construction deadline and, in fact, the evidence suggested that construction of the spacecraft never began.¹⁶ Therefore, the Bureau could have just as easily – perhaps more easily – based its holding on EchoStar's failure to satisfy its Completion of Construction milestone deadline.

IV. THE COMMISSION'S CDR MILESTONE REVIEW SHOULD RELY PRIMARILY ON NON-CONFIDENTIAL DOCUMENTS THAT ARE EASILY AND QUICKLY REVIEWED

In highlighting these cases, Boeing is not suggesting that the CDR milestone should be abandoned. Instead, Boeing suggests that, as implemented, the CDR milestone review process has become exceedingly cumbersome and does not serve its original purpose. The Commission created the CDR milestone to provide an objective and easily enforced interim indicator of whether a licensee is proceeding with the development of its satellite during the two years between the execution of a manufacturing contract and the initiation of physical construction. The Commission's three examples of evidence that licensees could employ to satisfy this requirement – (1) large payments of money to a satellite manufacturer, (2) affidavits from

¹⁴ See *id.*, ¶ 2.

¹⁵ See *id.*, ¶ 4.

independent manufacturers confirming that CDR has been completed, and (3) evidence that long lead items have been order – furthered the Commission’s goals because each of them is reasonably objective and easy to review and verify.

In contrast, an administrative review of a CDR report for a satellite generally requires a detailed and potentially lengthy technical assessment to determine its adequacy. Possibly for this reason, the Bureau decisions regarding CDR milestone compliance that have openly relied on the substance of a CDR report as a basis for a decision to cancel a license have not been granted expeditiously and, consequently, have not reduced the time that scarce spectrum resources have remained potentially encumbered by non-compliant licensees.

Boeing therefore suggests that, rather than requiring satellite licensees to routinely disclose CDR reports to demonstrate compliance with the CDR milestone, the Bureau should instead rely primarily on the three factors originally identified by the Commission to establish in most cases whether the CDR deadline has been satisfied.

In making this argument, Boeing acknowledges that, in a few cases, CDR reports have been used by the Bureau not for establishing compliance with the CDR milestone, but for other evidentiary purposes. Leaving aside the question of whether such collateral use of CDR information is appropriate, Boeing believes that such collateral use might justify the required disclosure of CDR reports only in rare cases (such as when a satellite licensee has requested a milestone extension or major modification) and not as a matter of routine.

For example, in the above referenced Spectrum Five decision, the licensee attempted to justify its request for additional time to satisfy its milestones in part by asserting that the

Footnote continued . . .

¹⁶ See *id.*, ¶ 7.

development of its satellites “involves unique engineering challenges.”¹⁷ The Bureau rejected this argument based on the substance of the CDR report, concluding that

Nothing in the record suggests Spectrum Five will use any unique or technologically innovative equipment in its proposed satellites. To the contrary, the satellite designs in Spectrum Five’s CDR filing reflect existing, off-the-shelf technology already used to manufacture a number of on-orbit space stations.¹⁸

As noted previously, the Bureau’s observations in this regard (which the subject manufacturer, Space Systems/Loral, may not have appreciated in the public record) were arguably unnecessary because the Bureau had ample other justifications to deny Spectrum Five’s milestone showing and extension request.

In another illustrative case, the Bureau appears to have employed the substance of a CDR report to help justify the *grant* of a milestone extension to a satellite licensee. Specifically, TerreStar Networks, Inc. sought an additional ten months to launch a 2 GHz MSS spacecraft arguing that unforeseeable technical problems delayed the completion of the satellite.¹⁹ Inmarsat opposed TerreStar’s request arguing that the technical problems resulted from changes in the satellite design that TerreStar made late in the construction process.²⁰ In rejecting this argument, the Bureau appears to have relied on TerreStar’s CDR report to conclude that the satellite design changes that resulted in the technical problems were made at or before the completion of the CDR and not late in the process.²¹

¹⁷ *Spectrum Five Order*, ¶ 12.

¹⁸ *Id.*, ¶ 13.

¹⁹ *See TerreStar Networks, Inc., Request for Milestone Extension*, DA 07-4148, ¶¶ 1 and 7 (Oct. 3, 2007).

²⁰ *See id.*, ¶ 7 n.16.

²¹ *See id.*

In the TerreStar case, the licensee could have voluntarily chosen to submit portions of its CDR report as evidence of the timing of the design changes that resulted in technical problems to the completion of the satellite. This evidence did not need to come into the record as a result of the Bureau requiring the CDR Report's filing.

Further, in unique cases such as these, where the licensee has requested special treatment through an extension of its milestone deadlines or a major design change to the satellite late in the construction process, a Bureau requirement to submit a portion of the CDR report to support its request may be appropriate. In most cases, however, the Commission's goal of ensuring expeditious construction of licensed satellite networks would be better served by keeping the CDR milestone review process relatively simple, objective and expedient. This can best be accomplished in the vast majority of cases using the original evidentiary tools identified by the Commission and by avoiding confidential disclosures and Bureau reliance on sensitive and proprietary CDR reports. Boeing therefore believes the Commission should not provide greater specificity in its rules concerning the evidence appropriate for demonstrating compliance with the CDR milestone.²² Instead, the Commission should conclude that its original requirements for demonstrating compliance with its CDR milestone are appropriate and should be utilized by satellite licensees and the Commission staff in the vast majority of cases.

V. CONCLUSION

For the reasons discussed herein, the Commission does not need to provide greater specificity in its rules concerning the evidence appropriate for demonstrating compliance with the CDR milestone. The Commission, however, should employ this opportunity to reaffirm that

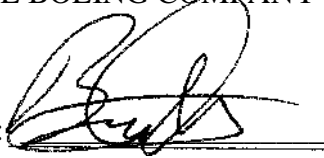
²² *Id.*, ¶ 30.

its goals for managing scarce spectrum and orbital resources are best served in the vast majority of cases by using the Commission's original evidentiary requirements for satellite licensees seeking to demonstrate compliance with their CDR milestone requirements.

Respectfully submitted,

THE BOEING COMPANY

By:

A handwritten signature in black ink, appearing to be "Bruce A. Olcott", written over a horizontal line.

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